

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) An apparatus for displaying a hierarchical structure of a plurality of classes, comprising:

a memory configured to hierarchically store a database for the plurality of classes each having properties, each class representing a concept characterized by the properties, the properties of a parent class in the plurality of classes being inherited to ~~[[each]]~~ child ~~[[class]]~~ classes belonging to the parent class;

a display configured to output:

a first area ~~[[of]]~~ representing the parent class, the first area including edges enclosing the first area; and

a second area within the first area ~~of each child class, the second area having edges and representing a child class;~~

wherein, the edges of the second area are included within the edges of

~~the first area including all of the second area of each child class to~~  
indicate an inclusion relationship between the parent class and  
the respective child class; and

an operation unit configured to select the first area or the second area on said display;

wherein, when said operation unit selects the second area, said display outputs a

list of properties of the respective child class, the list including the properties of the parent class.

2. (Original) The apparatus according to claim 1, wherein said display outputs all of the first area including all of the second area.
3. (Previously Presented) The apparatus according to claim 1, wherein said display outputs class information related to the parent class or the child class in response to a selection from said operation unit.
4. (Previously Presented) The apparatus according to claim 3, wherein said display outputs a list of the properties of the parent class when said operation unit selects the first area.
5. (Previously Presented) The apparatus according to claim 4, wherein said display outputs property information related to one property from the list of properties when said operation unit selects the one property from the list of properties.
6. (Original) The apparatus according to claim 1, wherein said display outputs a mark in correspondence with each class of the first area and the second area, and wherein the mark represents that a corresponding class hierarchically includes a child class.
7. (Previously Presented) The apparatus according to claim 6, wherein said operation

unit indicates whether an area of the child class is displayed in an area of the corresponding class.

8. (Original) The apparatus according to claim 7, wherein a status of the mark of the corresponding class of which the area of the child class is displayed is different from a status of the mark of the corresponding class of which the area of the child class is not displayed.
9. (Original) The apparatus according to claim 8, wherein a status of the mark of the corresponding class of which the child class has an instance is different from a status of the mark of the corresponding class of which the child class does not have an instance.
10. (Original) The apparatus according to claim 9, wherein said display outputs another mark in corresponding with the child class which has the instance.
11. (Original) The apparatus according to claim 7, wherein said operation unit selects a class to display direct classes from the plurality of classes, and wherein said display outputs the direct classes to which the class belongs.
12. (Original) The apparatus according to claim 7, wherein said operation unit sets a universal root class commonly including a first hierarchical structure derived from a first root class and a second hierarchical structure derived from a second root class.

13. (Previously Presented) The apparatus according to claim 7, wherein said operation unit sets a retrieval start point to the parent class of the first area on said display, and wherein a retrieval object is limited to the child class having the instance.
14. (Previously Presented) The apparatus according to claim 13, wherein said operation unit sets the retrieval start point to a class including at least two child classes each having an instance.
15. (Previously Presented) The apparatus according to claim 5, wherein the child class inherits at least one property of each of a plurality of parent classes in the plurality of classes stored in said memory.
16. (Original) The apparatus according to claim 15, wherein a display status of the child class inheriting at least one property of each of the plurality of parent classes is different from a display status of another child class not inheriting at least one property of each of the plurality of parent classes.
17. (Original) The apparatus according to claim 16, wherein said operation unit indicates a reference of an inheritance source class of one property of the child class inheriting at least one property of each of the plurality of parent classes, and wherein the inheritance source class is one of the plurality of parent classes.
18. (Original) The apparatus according to claim 5, wherein a color of a property in the list of properties of the child class as an inheritance destination class is the same as

a color of the parent class having the property as the inheritance source class.

19. (Original) The apparatus according to claim 1, wherein said operation unit sets a number of hierarchical levels for a plurality of classes at an initialization mode to display the hierarchical structure of the plurality of classes.
20. (Original) The apparatus according to claim 19, wherein said operation unit sets an identifier of each class to be expansibly displayed in the plurality of classes at the initialization mode.
21. (Currently Amended) A method for displaying a hierarchical structure of a plurality of classes, comprising:
  - hierarchically storing a database for the plurality of classes each having properties, each class representing a concept characterized by the properties, the properties of a parent class in the plurality of classes being inherited to ~~[[each]]~~ child ~~[[class]]~~ classes belonging to the parent class;
  - displaying:
    - a first area ~~[[of]]~~ representing the parent class, the first area including edges enclosing the first area; and
    - a second area ~~of each child class belonging to the parent class~~ within the first area, the second area having edges and representing a child class~~[[.]]~~;
  - wherein, the edges of each second area are included within the edges of  
the first area ~~including all of the second area of each child class~~ to

indicate an inclusion relationship between the parent class and  
the respective child class;  
selecting the second area displayed; and  
displaying a list of properties of the respective child class, the list including the  
property of the parent class.

22. (Currently Amended) A computer readable medium storing a computer readable  
program code for causing a computer to display a hierarchical structure of a  
plurality of classes, said computer readable program code comprising:

instructions for a first program code to hierarchically store a database for the  
plurality of classes each having properties, each class representing a  
concept characterized by the properties, the properties of a parent class in  
the plurality of classes being inherited to [[each]] child [[class]] classes  
belonging to the parent class;

instructions for a second program code to display:

a first area [[of]] representing the parent class, the first area including  
edges enclosing the first area; and

a second area ~~of each child class~~ within the first area, the second area  
having edges and representing a child class;

wherein, the edges of each second area are included within the edges of

~~the first area including all the second area of each child class to~~

indicate an inclusion relationship between the parent class and the  
respective child class;

instructions for a third program code to select the second area displayed; and

instructions for a fourth program code to display a list of properties of the  
respective child class, the list including the properties of the parent class.

23. (New) An apparatus for displaying a hierarchical structure of a plurality of classes stored in a hierarchical type database, comprising:

- a hierarchical structure display unit configured to display a first area and a second area, the first area representing a first class from the plurality of classes and the second area representing a lower level class belonging to the first class, the first area including all the second area;
- an operation unit configured to select the first class or the lower level class by selecting the displayed first or second area;
- a class information display configured to display information corresponding to the selected first or lower level class;
- a property list display configured to display a list comprising a property of the selected first or lower level class and a property of a higher level class inherited to the selected first or lower level class;
- a memory configured to store a first flag corresponding to the first class and a second flag corresponding to the lower level class;
- an update unit configured to update the second flag to "ON" when the second flag is set to "OFF" and inheritably update the first flag to "ON" when the first flag is set to "OFF", wherein the first flag and the second flag is updated when an instance is added to the lower level class; and
- a decision unit configured to decide whether the lower level class includes the instance based on the first and second flag;

wherein the hierarchical structure displays a first mark corresponding to the first flag and a second mark corresponding to the second flag based on a decision result of the decision unit, the first mark being displayed in the first area and the second mark being displayed in the second area.